Timber Supply Review

Kispiox Timber Supply Area

Information Report
October 2000

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Introduction

The British Columbia Forest Service is required by law to formally review the timber supply* in all timber supply areas* and tree farm licence* areas in the province. A review of each of the areas is completed at least once every five years. The main objectives of the reviews are:

- to identify the economic, environmental and social information that reflects the current forest management practices—including their effects on the short- and long-term timber supply
- to identify where improved information is required for future timber supply forecasts
- to provide the chief forester with information to make any necessary adjustments to the allowable annual cuts* for the next five years

* Throughout this document, an asterisk at the end of a phrase or word indicates that a definition can be found in the margin.

Objective of this document

The objective of this document is to provide an opportunity for public review of the draft data and management assumptions that will be applied in reviewing the timber supply for the Kispiox timber supply area. This document represents the early stages of the timber supply review process and is intended to provide a non-technical overview of the draft data and management assumptions that will be used in the upcoming *Kispiox Timber Supply Area Analysis Report*.

The *Kispiox Timber Supply Area Analysis Report* will be one of the documents that the chief forester will consider in making the allowable annual cut determination under Section 8 of the *Forest Act*. Public input is encouraged to ensure the best information is used in determining allowable annual cuts.

This report contains a general description of the data assumptions and current forest management practices related to timber supply for the Kispiox timber supply area. For the purpose of this timber supply review, current practices can be defined as the set of land-use decisions and forest management practices that are currently implemented and enforced. Future forest management objectives that may be established but are not currently implemented and enforced are not included.

The draft data and management assumptions are summarized on pages 9 through 12. For a more detailed description of the information, please contact the Kispiox Forest District Office in Hazelton or the Prince Rupert Forest Region Office in Smithers and request a copy of the data package. The public will have 30 days to review and comment on the information report and data package. A response form at the end of this document will assist you in providing your comments. Written comments will be accepted until November 20, 2000.

Timber Supply Review process

In British Columbia, a process of determining allowable annual cuts has been in place since the late 1940s. However, the process has changed significantly since then. More recently, the process has had some minor revisions designed to improve efficiency and encourage earlier public review through the release of this report.

Figure 1 (next page) illustrates the five-step process that has been developed for the Timber Supply Review of timber supply areas. The diagram indicates the current status of the timber supply review for the Kispiox timber supply area, and the estimated time required for each step.

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Timber supply
A harvest level that is forecasted to be available over time, under a particular management regime.

Timber supply area
An integrated resource management unit established in accordance with Section 7 of the *Forest Act*.

Tree farm licence
Provides rights to harvest timber, and outlines responsibilities for forest management, in a particular area.

Allowable annual cut (AAC)
The rate of timber harvest permitted each year from a specified area of land, usually expressed as cubic metres of wood per year.

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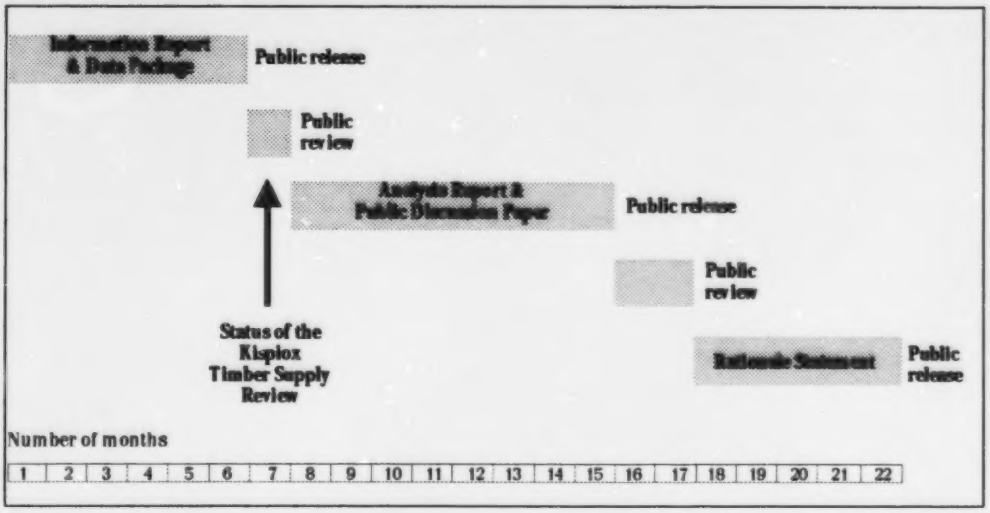
Public release
Public review
Public release
Public review
Status of the Kispiox Timber Supply Review
Public release
Number of months
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22

Figure 1.
Status of the timber supply review process for the Kispiox timber supply area

The process for reviewing the timber supply and establishing the allowable annual cut for tree farm licence areas is based on similar principles; however, the process currently takes 30 months to complete. By the end of 2001, a new process for tree farm licences will take 20 months from start to completion.

The chief forester's responsibility

Determining the allowable annual cuts for Crown forest lands in British Columbia is the responsibility of the province's chief forester. It is one of the chief forester's most important responsibilities since it affects the local and provincial economies and environment—now and in the future. Section 8 of the *Forest Act* requires the chief forester to consider the following factors to determine allowable annual cuts for timber supply areas and tree farm licence areas:

a) the rate of timber production that may be sustained from the area, taking into account:
   - the composition of the forest and its expected rate of growth
   - the time in which the forest will become re-established
   - silvicultural treatments, including reforestation
   - standards of timber utilization
   - constraints on the amount of timber produced from the area due to use of the forest for purposes other than timber production
   - any other information which relates to the capability of the area to produce timber

b) the short- and long-term implications to the province of alternative rates of timber harvesting from the area

c) the nature, production capabilities and timber requirements of established and proposed processing facilities

d) the economic and social objectives of the Crown for the area, the region and the province, as expressed by the minister of forests

e) abnormal insect or disease infestations and major salvage programs planned for the timber on the area

Some of these factors can be measured and analyzed—others cannot. Ultimately, the chief forester's determination is an independent, professional judgement based on the best available information. Information that is relevant to the factors listed above is provided to the chief forester by government agencies, the minister of forests and the public.

One of the objectives of the Timber Supply Review is to incorporate changes arising from new information, new practices and new government initiatives

that may have an impact on timber supply. In the event of significant change, the allowable annual cut may be reviewed in less than the required five years.

Following the release of the allowable annual cut determination by the chief forester, the minister of forests apportions the cut to the various licences and programs.

Principles of the Timber Supply Review

In determining allowable annual cuts—in addition to the requirements outlined in Section 8 of the *Forest Act*—the following principles have been developed.

The Timber Supply Review:

- is a decision-making process for establishing the allowable annual cut for timber supply areas and tree farm licence areas by the chief forester on a maximum five-year cycle, as required under Section 8 of the *Forest Act*; **it is not a process for making land-use or management decisions**
- incorporates the best information available including all relevant current practices, and identifies where new information is needed
- reflects the results of implemented plans and land-use decisions, and provides a benchmark for future planning processes
- involves other agencies, affected groups and the public

Land use planning

In 1994, the *Babine River Local Resource Use Plan* was approved by the district managers of the Kispiox and Bulkley (now Bulkley/Cassiar) forest districts and by the Ministry of Environment Lands and Parks (Skeena Region) and will be reflected in the analysis.

In April 1996, the *Kispiox Land and Resource Management Plan* was approved by government. The seven-year planning process provided an opportunity for the public, interest groups and government to make recommendations to government regarding future management of public forest lands in the Kispiox timber supply area. In 1996, key objectives outlined in the plan were legally designated in a higher-level plan.

The plan included the development of special management zones to maintain significant values in the following areas: Atna/Shelagyote, East Kispiox/Kuldo, Rocher Deboule, Babine River Valley, and in community watersheds. As well, recommendations were made on new protected areas that included the Swan Lake Wilderness Area, Babine River Wilderness Area, Kitwanga Mountain, and the Bulkley Junction on the Skeena River. These four areas have now been officially designated as provincial parks. Catherine Creek, a fifth area, was also recommended as a protected area. Since then, Catherine Creek has been officially designated as an ecological reserve.

As part of the plan, the Upper Kispiox Valley and the Seven Sisters areas were deferred from harvesting to allow local planning processes to make resource management recommendations to government. In June 1999, in the Upper Kispiox Valley about 35,400 hectares were officially designated as provincial park and 7,600 hectares as a special management zone. It is anticipated that the Seven Sisters area will be formally designated as a provincial park in 2000.

The designated protected areas will be excluded from the timber harvesting land base*, and the resource management zones and objectives will be examined in sensitivity analyses*.

Description of the timber supply area

The Kispiox timber supply area covers approximately 1.2 million hectares in the northwest interior of British Columbia. It is bounded by Rocher Deboule Range and

Timber harvesting land base
Crown forest land within the timber supply area that is currently considered feasible and economical for timber harvesting.

Sensitivity analysis
A process that examines how uncertainty in data and management assumptions affect timber supply.

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Biogeoclimatic zones
A large geographic area with broadly homogeneous climate and similar dominant tree species.

Nass Wildlife Area
The Nisga'a Treaty identified a very large area where Nisga'a people have hunting, trapping and fishing rights. Where this area overlaps with the Kispiox timber supply area, it is considered Crown lands and is available for timber harvesting activities.

Mount Quinlan to the south and the Sicintine watershed and Kispiox River headwaters to the north. The timber supply area is administered by the Kispiox Forest District office located in Hazelton.

The communities

The Kispiox timber supply area includes the communities of New Hazelton, Hazelton, South Hazelton, Kitwanga, Cedarvale, Two Mile, Hagwilget, Gitanmaax, Glen Vowell, Kispiox, Kispiox Valley, Gitseguecla, Gitwangak and Gitanyow.

According to the 1996 Census, the population increased by approximately 5.1 per cent since 1991 to 6,292. The District of New Hazelton—with a population of 826— is the principal commercial, administrative and retail centre for the area. By 2001, the population of the Kispiox timber supply area is expected to grow by another 5.0 per cent to 6,650.

Forest land resources

There are six biogeoclimatic zones* within the timber supply area. The distinct ecological features and the unique nature of the area provides for a broad range of ecological values and natural resources. Forest products, botanical products, outdoor recreation, tourism, mineral exploration and a variety of wildlife habitat highlight the wide range of resources and values found in the Kispiox timber supply area.

Many tree species are commercially harvested and processed into a variety of wood products. The diverse forest also provides local residents with firewood, berries, medicinal plants and wild mushrooms. In the fall, the commercial harvesting of pine mushrooms provides an important economic opportunity to many local and non-resident pickers. However, the management of this resource is currently unregulated and there is uncertainty about an appropriate degree of regulation that might be required in the future.

The scenic mountain landscapes and numerous rivers and lakes provide a variety of opportunities for outdoor recreation and tourism. Outdoor activities include climbing and mountaineering, hiking, rafting, canoeing, cross-country skiing, snowmobiling, dog-sledding, trapping, hunting and fishing. Hunting and fishing have been popular for many years and for First Nations these activities have important cultural significance.

Most of the timber supply area has a high or moderate mineral potential and there are several active mineral tenures scattered throughout the area. However, although mining operations have been significant in the past, at present there are no operating mines in the area.

The Kispiox timber supply area hosts an abundance of wildlife and fish species including grizzly bear, moose, mule deer, mountain goat, lake trout, trout, salmon and steelhead. Black bears are common and widespread, and a population of the Kermode-colour variant of black bears extends into the western half of the area.

The many protected areas, the special management in the Babine River, and the local forest practices all contribute to managing and protecting important wildlife habitat and other resource values in the Kispiox timber supply area.

First Nations

The Gitxsan, Wet'suwet'en, Gitanyow, Nisga'a, Nat'oo'ten, and Tsimshian First Nations have traditional lands within the Kispiox timber supply area. The Gitxsan Nation has five villages (Gitanmaax, Glen Vowell, Kispiox, Gitseguecla, and Gitwangak), and the Wet'suwet'en and the Gitanyow have one village each (Hagwilget and Gitanyow, respectively).

The Nisga'a Treaty, finalized in April 2000, includes the Nass Wildlife Area*, which covers part of the Kispiox timber supply area.

The Gitanyow are currently engaged in accelerated treaty negotiations toward an agreement-in-principle with the province and Canada. They are also engaged in bi-lateral negotiations with the province at a forestry interim measures table. The Wet'suwet'en are at the agreement-in-principle stage of the treaty process. The Wet'suwet'en, the province and Canada are currently focused on implementation of a pre-treaty agreement on lands and resources, primarily regarding forestry economic development. The Gitxsan are not involved in the treaty process but have been engaged in bi-lateral negotiations with the province under a Reconciliation Agreement that was signed in September 1998.

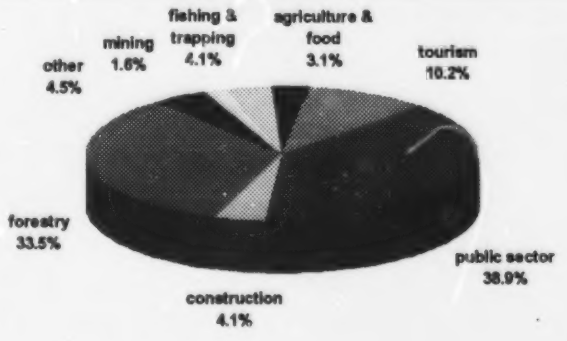
All of the First Nations are interested in increasing their involvement in the forestry sector and acquiring forest tenure. They have also expressed concerns about timber harvesting in areas with high cultural and economic values. An Archaeological Overview Assessment, which identifies sites of potential archaeological significance, has been completed. Other inventory studies to assess botanical forest products and cultural heritage resources (traditional use studies, and archaeological impact assessments) are ongoing. Once these studies have been completed, they will be considered in future timber supply reviews.

The economy

The economy of the Kispiox timber supply area is well diversified. Figure 2 illustrates total employment by industry sector for the area. While forestry is an important sector of the timber supply area's economy, commercial fishing, tourism, ranching and the public sector are also important sources of employment.

Forestry employment in the timber supply area is supported by harvesting and silviculture activity, and the processing of wood products. Facilities range from single owner-operators to Skeena Cellulose's large lumber facility at Carnaby, which utilized 310,000 cubic metres of timber in 1999. During 1999, about 200 people were employed in the timber supply area mills.

The forestry sector supports numerous other jobs in the region through companies and employees purchasing goods and services from local businesses. This spending is another indicator of the role forestry has in the economy. For every 100 direct forestry jobs in the Kispiox timber supply area, another 20 to 42 indirect and induced jobs* are supported, depending on the type of forestry activity (logging or manufacturing) and the associated level of income. In comparison, every 100 jobs in the public sector or tourism supports another six to nineteen positions.



Note: 'Forestry' consists of harvesting related activity and associated manufacturing. 'Other' consists of finance, insurance, real estate and other business services. 'Tourism' consists of accommodation and food services; and the 'public sector' consists of local and provincial government services, health and education.
Source: The 1996 Forest District Tables, April 1999. Ministry of Finance and Corporate Relations.

Figure 2.
Major employment by sector for the Kispiox timber supply area, 1996

History of the allowable annual cut

In December 1996, the chief forester set the allowable annual cut at 1,092,611 cubic metres. This harvest level accounted for issued woodlot licences, but was otherwise unchanged from the previous determination.

As part of the 1996 determination, the chief forester gave direction to resolve uncertainties with respect to the timber supply in the Kispiox timber supply area. In preparation for the upcoming allowable annual cut determination, the following issues were examined:

- **environmentally sensitive areas*** - at the time of the last allowable annual cut determination, district staff noted some uncertainty about the reliability of the environmentally sensitive areas mapping. Uncertainty was also noted about the reduction factors associated with environmentally sensitive areas.

  Since then, areas having fragile or unstable soils have been re-mapped. As well, other types of environmentally sensitive areas and the corresponding reduction factors have been re-examined. The results of these re-examinations will be considered in the timber supply analysis.
- **deciduous* timber** - the previous determination noted the need to study alternative methods of managing the deciduous timber harvest.

  Following the determination, a deciduous management strategy was created. The recommendations of that strategy will be considered in the timber supply analysis.
- **alternative logging systems** - the previous determination noted that helicopter logging was not included in the operability assessment for the timber supply area, although forest development plans identified some areas for helicopter logging.

  Since then, the use of alternative logging systems, particularly helicopter logging, has been monitored. These findings will be considered through sensitivity analysis in the timber supply analysis.
- **cutblocks* with reserves** - the previous determination noted that cutblocks with reserves should be monitored to examine their impact on timber supply.

  Current management practices and forest development plans have been reviewed to determine the amount of timber reserved from harvesting. The results of this review will be considered in the timber supply analysis.
- **botanical forest products** - at the time of the last allowable annual cut determination, the chief forester requested an investigation into possible methods of integrating the management of botanical forest products (pine mushrooms) into landscape unit planning.

  Research into the extent and distribution of the pine mushroom is progressing. Management strategies and objectives are expected to be developed as part of the landscape unit planning process. Information gathered from research and landscape unit planning may be available for consideration in future timber supply reviews.
- **estimates of unsalvaged losses** - at the time of the last allowable annual cut determination, the unsalvaged losses due the balsam bark beetle were not accounted for in the analysis.

  A study was undertaken in the summer of 1999 to examine the extent of the balsam bark beetle infestation and determine appropriate loss factors. Information that is available regarding the infestation will be considered in this timber supply review analysis.

Note: For more information on these points, please refer to the Kispiox Timber Supply Area Rationale for Allowable Annual Cut Determination, December 5, 1996.

Indirect and induced jobs
Indirect jobs are supported by direct business purchases of goods and services. Induced jobs are supported by employee purchases of goods and services; for example, at retail outlets.

Environmentally sensitive areas
Areas with significant non-timber values, fragile or unstable soils, or impediments to establishing a new tree crop, or areas where timber harvesting may cause avalanches.

Deciduous
Deciduous trees commonly have broad-leaves and usually shed their leaves annually.

Cutblock
A specific area, with defined boundaries, authorized for harvest.

Current timber supply review

Public forest lands in British Columbia provide recreational enjoyment, fish and wildlife habitat, water supplies, timber resources and many other benefits. The Ministry of Forests manages the timber, range and recreation resources on public lands, and the Ministry of Environment, Lands and Parks manages fish, wildlife, water resources and parks. Both agencies subscribe to the principle of integrated resource management*, where all resources are considered when making forest management decisions.

The Forest Practices Code* is now law and has been fully implemented in the timber supply area since June 15, 1997. The new practices may influence both the short- and long-term timber supply.

The data and management assumptions that will be used in the timber supply analysis will be based on the existing land-use designations and resource management practices that are currently approved and implemented in the Kispiox timber supply area. The chief forester will also consider any new information, based on implemented changes, at the time of the allowable annual cut determination.

Draft data and management assumptions for public review

The public is encouraged to review the data and management assumptions for completeness and accuracy. In determining an allowable annual cut, the chief forester will consider these assumptions as required by Section 8 of the *Forest Act*. The following general outline contains some of the more pertinent information that will be used in the timber supply analysis and, subsequently, in the chief forester's allowable annual cut determination for the Kispiox timber supply area. More detailed information can be found in *Appendix A: Data Package*. This appendix is available upon request from the Ministry of Forests offices listed at the end of this report.

Land base factors

- **operable area** - the forested area in the Kispiox timber supply area has been assessed for operability based on economic attributes, timber types and terrain accessibility. Only those areas that are considered operable will contribute to the timber harvesting land base.
- **low productivity sites** - in addition to the above, forest types that are not considered fully available for harvesting due to forest characteristics, such as low timber volumes or low growth productivity will not contribute to the timber harvesting land base.
- **marginal timber types** - deciduous - leading timber types are not currently harvested in the Kispiox timber supply area. Also, types that do not reach merchantable heights or stands having low stand density have marginal economic value. These stands will not contribute to the timber harvesting land base.
- **environmentally sensitive areas** - an evaluation of the degree of environmental sensitivity and the amount of past harvesting within these areas was used to determine their appropriate future contribution to the timber harvesting land base.

  In the Kispiox timber supply area, environmentally sensitive areas include areas with avalanche and terrain stability concerns. All or portions of these areas will not contribute to the timber harvesting land base.

Integrated resource management
The identification and consideration of all resource values, including social, economic and environmental needs, in resource planning and decision-making.

Forest Practices Code
Legislation, standards and guidebooks that govern forest practices and standards, with heavy penalties for violators.

Coniferous
Coniferous trees have needles or scale-like leaves and are usually 'evergreen'.

- **forest roads** - harvesting and road construction follow provincial guidelines. Currently, it is estimated there are 8,953 hectares of existing roads, trails, and landings within the Kispiox timber supply area. Also, a preliminary estimate shows that an additional 7.3 per cent of the remaining unharvested areas will be lost over time to future roads, trails and landings construction.

Inventory factors

- **forest inventory** - the current inventory has been updated to 1997 to take into account recent harvesting, road building and silviculture activities.

  In the Kispiox timber supply area, the dominant tree species are western hemlock and subalpine fir. Spruce and lodgepole pine are also present, while western redcedar, birch, aspen and cottonwood are less abundant.
- **minimum harvestable ages** - the minimum harvestable age is the earliest age at which a forest stand is estimated to reach a merchantable size and considered available for harvest. For the timber supply analysis, the minimum harvestable age is defined as the earliest age at which a forest stand is estimated to reach a merchantable size. This age is based on the time required for regenerating stands to achieve a minimum stand volume of 200 cubic metres per hectare.

Forest re-establishment factors

- **basic silviculture** - British Columbia laws require that areas that are harvested and expected to produce timber in the future must be reforested with ecologically suitable species within a specified time frame. The most common silvicultural practice is to harvest; then if necessary prepare the site for reforestation; reforest by planting a mix of species or by relying on natural regeneration; and control competing vegetation.

  In the Kispiox timber supply area, reforestation is achieved predominantly by planting a mixture of coniferous* species. Natural regeneration also occurs on harvested areas, adding to the tree species diversity. In the timber supply analysis, to reflect current practice it is assumed that areas will be reforested within five years after the completion of harvesting.
- **tree improvement** – a percentage of the seedlings planned for planting in 2000/2001 in the Kispiox timber supply area will be from seed orchards that produce improved stock. This percentage is expected to increase over the next 10 years. Improved stock does not mean that the seedlings are genetically modified but rather they are the product of superior parent trees selected from a large number of forest stands found in the interior. Therefore, the seedlings produced from these parents exhibit qualities such as straight stem form, higher volume production, and tighter wood density. Provincial studies show that improved stock can result in a volume increase of about two per cent over the long term. This potential increase in stand volume will be examined in the timber supply analysis.

Timber utilization factors

- **timber utilization** - volume estimates will be based on the utilization of all merchantable trees which meet or exceed the following standards: a minimum 10-centimetre top diameter inside bark; a maximum 30-centimetre high stump; and a minimum diameter —measured at 1.3 metres above the ground—of 12.5 centimetres for lodgepole pine, and 17.5 centimetres for other coniferous species.

Infestations, devastations, and salvage of timber

Each year, portions of the forests in the Kispiox timber supply area are damaged by natural agents such as fire and wind. It is anticipated that some of the damaged timber will not be salvaged due to road and economic limitations. The unsalvaged volume attributable to wildfire and windthrow is estimated as 12,840 cubic metres annually. The annual loss to balsam bark beetle is being compiled.

Factors to be considered for purposes other than timber production

Forest practice guidelines for managing forest resources such as biodiversity, scenic values, wildlife habitat and water quality will be reflected in the timber supply analysis through the use of forest cover requirements, and volume and land-base reductions.

- **general forest cover requirements** under current forest management practices, cutblocks must achieve green-up* before adjacent areas are permitted to be harvested. For example, to account for forest cover requirements in the integrated resource management zone, a maximum of 33 per cent of the timber harvesting land base will be allowed to have forests less than three metres tall at any time. In addition, considerations for maintaining areas of old-growth forests for biodiversity* will be applied in the timber supply analysis (see below, under biological diversity).
- **visually sensitive areas** - areas where the maintenance of scenic landscapes are priorities for recreation and tourism management are often adjacent to major travel corridors and waterways. Road construction and logging within these areas are planned and implemented to minimize visual impacts.

Recommended visual quality objectives have been established for scenic areas identified in the Kispiox timber supply area. These objectives vary according to the degree of visual sensitivity and will be reflected in the analysis.

- **community watersheds** - to account for resource values associated with community watersheds, the timber supply contribution from these areas will be limited so that a maximum of 21 per cent of the total area within a community watershed will be allowed to have forests less than 6 metres in height at any time.
- **riparian habitat*** - to meet the requirements of the Forest Practices Code, a portion of the timber harvesting land base will be considered unavailable for timber harvesting to account for riparian habitat areas along streams and lakes.
- **deer winter range** – to account for forest practices in the deer winter range, at least six per cent of the forested area within the deer winter range zone must be older than 150 years.
- **grizzly habitat** - the *Babine River Local Resource Use Plan* specifies that for identified high value grizzly bear habitat, there must be a 100-metre buffer around all wetlands, and no roads are to be built within 150 metres of the habitat area. In the analysis, a reduction will be applied to account for a 100-metre buffer around all wetlands in the habitat area. No reductions for buffers along roads will be modelled in the analysis since road construction guidelines will ensure that roads are not located within 150 metres of grizzly habitat areas.
- **biological diversity** - or biodiversity, is the full range of living organisms, in all their forms and levels of organization, and includes the diversity of genes, species, and ecosystems, and the evolutionary and functional processes that link them. The *Forest Practices Code* requires that biodiversity be examined at both the stand and landscape level.

Green-up
The time needed after harvesting for a stand of trees to reach a desired condition (usually a specific height) — to ensure maintenance of water quality, wildlife habitat, soil stability or aesthetics — before harvesting is permitted in adjacent areas.

Biodiversity (biological diversity)
The diversity of plants, animals and other living organisms in all their forms and levels of organization, and includes the diversity of genes, species and ecosystems, as well as the evolutionary and functional processes that link them.

Riparian habitat
The stream bank and flood plain area adjacent to streams or water bodies.

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Wildlife tree
A standing live or dead tree with special characteristics that provide valuable habitat for conservation or enhancement of wildlife.

Coarse woody debris
Logs and stumps that provide habitat for plants, animals and insects, and a source of nutrients for soil development.

Seral stages
Sequential stages in the development of plant communities that successively occupy a site and replace each other over time.

Landscape unit
A planning area based on topographic or geographic features, that is appropriately sized (up to 100 000 hectares), and designed for application of landscape-level biodiversity objectives.

Leaving wildlife tree* patches and coarse woody debris* for stand-level biodiversity is current practice in the Kispiox timber supply area. Generally, coarse woody debris objectives can be met by the contributions of non-merchantable timber left after harvesting. The current practice for leaving wildlife tree patches requires that a percentage of each cutblock be reserved. In the timber supply analysis, once an area is harvested the wildlife tree patches will be accounted for by reducing the timber harvesting land base. Wildlife tree patches will be included in a reduction of 10.9 per cent that also accounts for other unmapped areas of timber that remain unharvested because of low site productivity, marginal merchantability or riparian requirements.

Landscape-level biodiversity, primarily old-growth requirements, will be addressed in the timber supply analysis by applying averaged seral stage* constraints to each biogeoclimatic variant within each draft landscape unit*. This approach has been taken because at this time the landscape units and some of the biodiversity objectives are still draft and have not yet been formally established. However, some of the landscape-level biodiversity objectives have been defined through the *Babine River Local Resource Use Plan* and the *Kispiox Land and Resource Management Plan*. For example, the *Kispiox Land and Resource Management Plan* specifies that a minimum of 12 per cent of the forested area within a landscape unit must be older than 200 years at any time. The *Babine River Local Resource Use Plan* specifies maximum limits for the amount of area covered with younger forests (harvested areas) and requirements for retaining areas of older forests. These constraints will be applied in the timber supply analysis.

Sensitivity analyses will be undertaken to examine the potential impact on timber supply of applying the draft biodiversity emphasis objectives from the Prince Rupert Regional Landscape Unit Planning Strategy.

Implications of alternative rates of harvesting

- **alternative rates of harvesting** - many alternative harvest forecasts can be produced for a given set of forest conditions and management assumptions. Each alternative usually represents a trade-off between the harvest level in the short term and the subsequent rate of decline to the long-term harvest level. For the projected base case forecast*, the initial harvest forecast will be based on trying to achieve the current rate of harvest in the short term without compromising the long-term harvest level, and if necessary allowing for gradual and managed declines to lower harvest levels. The implications of alternative short-term rates of harvest will be examined in sensitivity analyses.
- **implications related to community dependence** - The impact of timber supply adjustments on local communities and the provincial economy is an important consideration in the timber supply review. The July 1992 *Kispiox Resource Management Plan Socio-Economic Analysis* reported that, provincially, harvesting, silviculture and processing activities associated with the harvesting of the Kispiox timber supply supported 985 direct person-years* and 702 indirect and induced person-years of employment. About 69 per cent of these jobs are located in the Kispiox timber supply area.

The socio-economic section of the upcoming timber supply analysis report will review the role of the forest sector in the timber supply area. To provide this update, current information on employment and fibre flows will be gathered from licensees, processing

facilities, the B.C. Forest Service and other stakeholders. Indirect and other related employment at both local and provincial levels will also be estimated using employment multipliers provided by the Ministry of Finance and Corporate Relations.

To examine the implications of alternative rates of harvest, employment co-efficients, reported in person-years per 1,000 cubic metres, will be developed and used to estimate changes to employment levels now and in the future from any potential harvest level changes.

Timber processing facilities

The socio-economic analysis will examine the implications of potential changes in timber supply for the area's four primary processing facilities: Skeena Cellulose Inc. in Carnaby and in New Hazelton; Kispiox Forest Products in South Hazelton; and Kitwanga Lumber Co. Ltd. in Kitwanga. The Kispiox Forest Products mill did not operate in 1999. It was shut down indefinitely in January 1999 and has not operated since. However, it is scheduled to start-up operations in October 2000, initially on a one-shift per day basis.

Implications for other processing facilities outside the timber supply area, which are reliant on Kispiox timber supply area fibre, will also be examined. During 1999, the timber supply area facilities processed approximately 1.3 million cubic metres of timber.

Economic and social objectives of the Crown

In a letter and a memo to the chief forester, the minister of forests has expressed the Crown's economic and social objectives for the province. The harvest flow objectives to be used in the timber supply analysis (see above, "Alternative rates of harvesting") are consistent with the minister's stated objectives.

In addition, economic and social objectives for the area and the general region will be derived from public input.

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in the Kispiox TSA

Base case forecast
The timber supply forecast which illustrates the effect of current forest management practices on the timber supply using the best available information, and which forms the reference point for sensitivity analysis.

Person-year(s)
One person working the equivalent of one full year, defined as at least 180 days of work. If someone works full-time for 90 days, he or she accounts for 0.5 person years.

Timber Supply Review
in the Kispiox TSA

Your input is needed

Establishing the allowable annual cut is an important decision that requires well-informed and thoughtful public input. Feedback is welcomed on any aspect of this *Information Report*, the *Data Package Appendix* and other topics related to the timber supply in the Kispiox timber supply area. The response form at the end of this document will assist you in preparing your comments. As well, Forest Service staff would be pleased to discuss questions or concerns that may help you prepare your response.

Please mail the completed response form and your comments to the Forest Service district manager located at the address below. Your comments will be accepted until November 20, 2000.

After receiving public input, the B.C. Forest Service will finalize the data and management assumptions that will be applied in this timber supply analysis. The timber supply analysis will be completed and available for review by mid-2001. You may also wish to participate in the second public review period, which will follow the release of the *Kispiox Timber Supply Area Analysis Report*.

Following the second public review period, the chief forester will examine all the information available in order to review the timber supply for the Kispiox timber supply area. The chief forester will then establish the allowable annual cut based on his consideration of the factors as required under Section 8 of the *Forest Act*.

You may identify yourself on your response if you wish. If you do, you are reminded that responses will be subject to the *Freedom of Information and Protection of Privacy Act* and may be made public. If copies of the responses are requested, personal identifiers will be removed before the responses are released.

For more information contact and/or mail your comments to:

District Manager
Kispiox Forest District
B.C. Forest Service
Bag 5000
Smithers, B.C.
V0J 2N0

Location:
2210 West Highway 62,
Hazelton, BC, V0J 1Y0

Phone: (250) 842-7600
Fax: (250) 842-7676

or electronically mail to:

Agathe.Bernard@gems3.gov.bc.ca

Kispiox Timber Supply Area
Timber Supply Review

Information Report Response Form

The *Forest Act* requires the chief forester to consider the following factors to determine the allowable annual cut for timber supply areas and tree farm licence areas in the province, as follows:

- the rate of timber production that can be sustained from the area;
- the short- and long-term implications to the province of alternative rates of timber harvesting from the area;
- the nature, production capabilities and timber requirements of established and proposed timber processing facilities;
- the economic and social objectives of the Crown for the area, the general region, and the province, as expressed by the minister of forests, and;
- abnormal insect or disease infestations and major salvage programs planned for the area.

We welcome your review to ensure the best available information is considered for the Kispiox timber supply area. Please provide your comments on this form, or in another format. Input will be accepted until November 20, 2000.

A. Economic and social objectives

Please use the space below to provide your comments regarding the economic and social information contained in this report or other information that you believe should be considered in completing the social and economic analysis for the Kispiox timber supply area.

B. Reviewing the draft data and management assumptions

Please use the space below to provide your comments regarding the draft data and management assumptions contained in this report or other information that you believe should be considered in the timber supply analysis for the Kispiox timber supply area.

Name (optional):_____

Address (optional):_____

Mail or fax your comments to:

District Manager
Kispiox Forest District
B.C. Forest Service
Bag 5000
Smithers, B.C.
V0J 2N0
Fax: (250) 842-7676

or electronically mail to:
Agathe.Bernard@gems3.gov.bc.ca

APPENDIX A

Data Package
Description of Data Inputs and Management Assumptions

This appendix is available upon request from the Ministry of Forests.

Offices are located at:

Kispiox Forest District
2210 West Highway 62
Hazelton, B.C.
V0J 1Y0

Phone: (250) 842-7600
Fax: (250) 842-7676

Prince Rupert Forest Region
3726 Alfred Avenue
Smithers, B.C.
V0J 2N0

Phone: (250) 847-7500
Fax: (250) 847-7463